

Lac production and processing in Chhattisgarh: status and prospects

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Palas trees in agricultural field

Lac is a natural resin, secreted by a tiny insect known as lac insect. In India, around twenty species of lac insect are found in which three species *i.e.* *Kerria lacca*, *Kerria chinensis* and *Kerria sharda* mainly used for lac production. Two strains of *Kerria lacca* *i.e.* *rangeeni* and *kusmi* contribute significantly in lac production. *Rangeeni* strain produces two crops in a year known as *katki* and *baisakhi* crop while *Kusmi* strain also produces two crops in a year known as *aghani* and *jethwi* crop. At present, contribution of *rangeeni* lac is around 41 per cent and *kusmi* lac is around 59 per cent in total national production. Lac host plants *i.e.* *palas* (*Butea monosperma*), *ber* (*Zizyphus mauritiana*) and *kusum* (*Schleichera oleosa*) are commercially utilized for lac cultivation in India. *Palas* is used for *rangeeni* lac cultivation, *kusum* is used for *kusmi* lac cultivation while *ber* is used for both type of lac cultivation. In India, lac cultivation is done in Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, West Bengal, Orissa, and parts of Uttar Pradesh, Andhra Pradesh, Gujarat and North East Region. Lac is export oriented commodity and around 70 per cent of national lac production is exported to more than 70 countries in semi-refined and refined form. The export of lac and its value added product was 6339.05 tons valued Rs. 21112.92 during the year 2010-11.

Chhattisgarh is a newly created state of India with the total geographical area of 13,787 thousand hectares. The state has 22 Administrative districts and 32 Forest divisions. Agriculture and allied activities in the Chhattisgarh state accounted for nearly 80 per cent of the work force in the state. Out of the total geographical area of 13,787 thousand hectares, net cropped area is 4,769 thousand hectares, which constitutes about 35 per cent of the total geographical area. Average rainfall in the state is around 1400 mm and about 90% of the total rainfall is confined in the monsoon season *i.e.* 15th June to September. The rainfall has erratic,

temporal and spatial distribution in the state. In the state, Forest occupies about 6,303 thousand hectares which constitutes about 45 per cent of the total geographical area. The majority of state population mainly depends on agriculture and forest for their livelihood and lac is one of the important source of cash income for the families.

Lac production : The national production of lac was 17900 tons during the year 2011-12, in which contribution of Chhattisgarh was 3200 tons. Chhattisgarh is second largest producer of lac amongst different lac producing states of the country and it has following strength related to lac production:

- Suitable agro-climatic condition for lac cultivation.
- State has traditional resources, knowledge and efficiency for production and processing of lac.
- Favorable infrastructural support from Chhattisgarh State Minor Forest Produce (Trade and Development) Co-operative Federation Limited, TRIFED,

Tribal Welfare Department, Zila Panchayat etc. for development and marketing of lac.

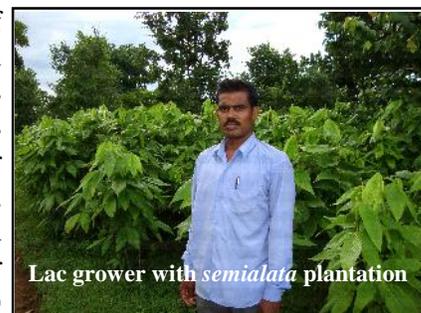
- Availability of large number and big patches of lac host trees *i.e.* *kusum*, *palas*, *ber* etc. for lac production.

- Huge number of trained lac growers in the state.

- Lac cultivation on *F. semialata* in backyard and plantation basis is increasing and popularizing in the state.

- Established lac processing industries.

Korba, Kanker, Rajnandgaon, Bilaspur, Raipur, Durg, Janjgir-Champa, Surguja, Dhamtari, Mahasamund and Bastar are the lac producing districts in Chhattisgarh state. District-wise lac production during the year 2009-10 and 2010-11 of the state has been presented in Table 1. The average lac production of Korba district in Chhattisgarh was 1292.5 tons followed by Kanker (632.5 tons), Rajnandgaon (355.0 tons), Raipur (330.0 tons)



Lac grower with *semialata* plantation

Table 1 : Lac Production scenario in Chhattisgarh

Sr. No.	District	Lac production (tons)		Average lac production (tons)	Share of districts in states production (percentage)
		2009-10	2010-11		
1.	Korba	2035	550	1292.5	37.03
2.	Kanker	830	435	632.5	18.12
3.	Rajnandgaon	570	140	355.0	10.17
4.	Bilaspur	235	120	177.5	5.09
5.	Raipur	460	200	330.0	9.46
6.	Surguja	85	55	70.0	2.01
7.	Janjgir-Champa	170	105	137.5	3.94
8.	Dhamtari	125	70	97.5	2.79
9.	Mahasamund	150	55	102.5	2.94
10.	Bastar	85	80	82.5	2.36
11.	Durg	20	15	17.5	0.50
12.	Others	230	160	195.0	5.59
Total		4995	1985	3490	100.00

Table 2 : Lac producing areas in Chhattisgarh

District	Lac producing areas
Bastar	Kesh kal, Kondagaon, Narainpur
Bilaspur	Gorella, Kota, Lorami, Pendra
Dhamtari	Gatta Silli, Nagri, Sihawa
Durg	Daudi, Lohara, Kusum
Janjgir-Champa	Balod, Sakti
Kanker	Antagarh, Bhanupratapur, Korar, Narharpur, Sambalpur
Korba	Bhaisama Bazar, Chaitama, Chhuri, Haldi Bazar, Katghora, Korvi, Madanpur, Pali, Pasan
Mahasamund	Bagbahara, Basan, Mahasamund, Pithora, Tendukona
Raipur	Amlipadar, Chhaila, Chhura, Gariyaband, Indogaon, Mainpur, Udanti
Rajnandgaon	Aawadhi, Bharitola, Khardi, Manpur, Mohala-chowki
Surguja	Balrampur, Chando, Chalgi, Mainpat, Pasta, Pratappur, Premnagar, Raghunathnagar, Ramanujganj, Wandrafnagar
Raigarh	Dharmi, Dharmjaigarh, Lailunga, Pathalgaon

Table 3 : Lac processing centers and lac based products manufactured in Chhattisgarh

District (center)	No. of lac processing units	Products made
Bilaspur (Pendra)	2	Seedlac, Button Lac
Dhamtari	12	Seedlac, Button Lac, Bleached Lac
Janjgir-Champa (Sakti)	3	Seedlac, Shellac, Bleached Lac, Dewaxed Shellac, Lac Dye
Kanker	2	Seedlac
Korba (Kathgora)	6	Seedlac, Shellac, Bleached Lac
Rajnandgaon	1	Seedlac, Shellac
Raipur	2	Bleached Lac, Aleuritic acid
Total		28

Table 4 : Quantity of sticklac processed in Chhattisgarh

Sr. No.	District/Centre	Lac processing (tons)		Average lac processing (tons)	Share in the state processing (percentage)
		2009-10	2010-11		
1.	Bilaspur (Pendra)	25	20	22.5	0.50
2.	Dhamtari	2200	1500	1850	40.88
3.	Janjgir-Champa (Sakti)	400	300	350	7.73
4.	Kanker	200	100	150	3.31
5.	Korba (Kathgora)	2500	1600	2050	45.30
6.	Rajnandgaon	125	80	102.5	2.27
Total		5450	3600	4525	100.00

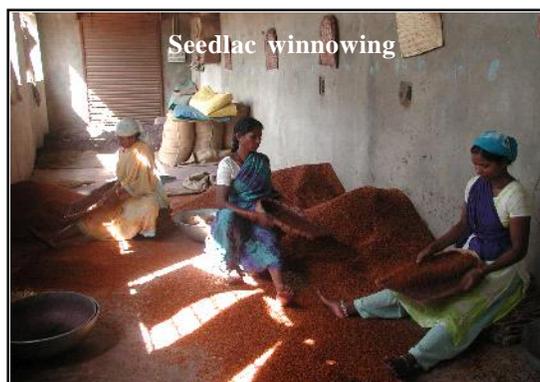


Lac processing unit

producing districts in Chhattisgarh was maximum 37.03 percent by Korba district followed by Kanker (18.12 percent) and Rajnandgaon (10.17 %). The share of different crops in the state lac production was (average of two years), *baisakhi* ranks 1st with the share of 42.48 percent followed by *jethwi* (32.38 %), *aghani* (14.97 %) and *katki* (10.17 %). The lac production scenario in Chhattisgarh has been presented in Table 1 and lac producing areas are presented in Table 2.

Lac processing : The Chhattisgarh state has established lac processing facilities. The state has a total of 28 lac processing units located at Pendra (2 processing units), Dhamtari (12), Sakti (3), Kanker (2), Kathgora (6), Rajnandgaon (1) and Raipur (2). Lac based products manufactured in Chhattisgarh are Seedlac, Button lac, Shellac, Bleached lac, Dewaxed Shellac, Lac dye and Aleuritic acid. The total amount of sticklac processed in Chhattisgarh was 5450 and 3600 tons during 2009-10 and 2010-11 respectively as compared to 18400 and 13600 tons at national level during the same period. Amongst the different districts of Chhattisgarh, average processing of sticklac is highest in Korba district (2050 tons) followed by Dhamtari (1850 tons), Janjgir-Champa (350 tons), Kanker (150 tons), Rajnandgaon (102 tons) and Bilaspur (22 tons). The lac processing centers with

Bilaspur (177.5 tons), Janjgir-Champa (137.5 tons) and Mahasamund (102.5 tons). The share of different lac



Seedlac winnowing

products manufactured and quantity of sticklac processed in Chhattisgarh have been presented in Table 3 and 4



Purchase of lac in local haat

respectively.

Major constraints in lac production in the state can be listed as follows :

- Shortage of fund for purchase of inputs used in lac cultivation.
- Scattered lac host plants and distant places from home create problem in cultivation and monitoring.
- Theft of lac.
- Uncertainty in lac production.
- Problem in marketing of broodlac.
- Problem in cultivation operations due to host height.
- Long distance of market for sale and lack of knowledge on current price of lac.
- Unavailability of improved inputs (synthetic net, pesticide, etc.) in nearest market.

Following remedial measures may be helpful in minimizing and eradicating the above mentioned constraints-

- Shortage of broodlac and uncertainty in production can be removed by training to lac growers on scientific method of lac cultivation.

- Formation of Self Help Group (SHG) and farmer's club for common benefit of lac growers. This group may be helpful in marketing of lac and broodlac, security of crop and availability of inputs and machines in lac

cultivation.

- Needs to strengthen co-operative societies for input and output marketing.
- Minimum support price of lac will motivate lac growers for lac cultivation.
- *Kusmi* lac quality is the best in the world. Therefore, lac growers should be promoted for *kusmi* lac production.

- Initiation of lac crop insurance.

Presently utilization of available lac host plants for lac cultivation is less at farmer's field and it is very less in case of host available in forest area. Lac production can be increased by more utilization of lac host plants and scientific method of lac cultivation. Lac may be an important factor for economic upliftment of farmers of Chhattisgarh. Demand of lac has been increased due to its uses in newer areas. Demand of Indian lac is more in the foreign market due to its better quality. There is also need to increase internal consumption of lac for stability in prices.

Received : 08.01.2013

Revised : 06.10.2013

Accepted : 07.11.2013